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MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

STATE DOCUMENTS COLLECTION

Monthly Activities Report of
the Air Quality Bureau

FEB 1 1978

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Helena, Montana 59601

December, 1977

1. Highlights:

The Anaconda Company submitted a check for \$73,600 for violating the 1974 Stipulation which requires compliance with the standards.

A plan for the implementation of SAMWG (Standing Air Monitoring Work Group) has been drafted.

The designation for attainment-non-attainment areas in the state is in process and will be submitted to EPA in January.

The Colstrip EIS Addendum responding to comments and setting forth the final conditions was printed.

2. Ambient Air Quality Network:

a. Standards Exceeded:

Violations of ambient air quality standards for SO₂ stations near the Anaconda smelter were:

State 1-hour	35
State 24-hour	11
Federal 24-hour	6
Federal 3-hour	5

Standards exceeded for December (SO₂ violations)

	Microwave	East Station	Broudy
State 1-hour	8	2	17
State 24-hour	0	0	2
Federal 3-hour	0	0	3
Federal 24-hour	0	0	2
High 1-hour	.42	.30	.88

Air Quality Network

SO ₂ (in ppm)	P.O.	Mill Creek	Hiway Jct.	C-Hill
Highest 1-hr reading	0.18	0.92	1.30	0.25
Highest 3-hr reading	0.09	0.54	1.05	.083
Highest 24-hr reading	0.04	0.31	0.31	.021
No. of readings	0	35	37	0

CO (in ppm) - Alpine West	Highest 1-hr	8.5 ppm
	Highest 24-hr	3.8 ppm

NO₂ (in ppm) - Hebgen Park, Butte Highest 1-hr .118 ppm
 Highest 24-hr 0.054 ppm

No. readings 0.05 - 16

b. Air Stagnation Advisories:

None in December

c. Laboratory Status

No. of samples for month 203
No. of determinations for month 287

d. Developments

Lab aide was hired to assist with ASARCO-Troy Project.

3. Permits and Tax Credits:

Construction permits applied for:

Earth Builders, Inc., Phillips Co., portable hot mix asphalt plant
Earth Builders, Inc., Phillips Co., portable gravel crushing plant
Shell Oil Co., Richland Co., refrigeration gas processing plant
Zook Brothers, Madison Co., portable gravel crushing plant
Zook Brothers, Madison Co., portable gravel crushing equipment

Construction permits approved:

Cenex, No. 3 boiler stack modification, So. of Laurel
Cenex, So. of Laurel, No. 4, boiler stack modification
Cenex, So. of Laurel, No. 5, boiler stack modification
Cenex, So. of Laurel, crude preheater stack modification
Cenex, So. of Laurel, FCC unit feed preheater stack modification
Cenex, So. of Laurel, FCC-CO boiler stack modification
Cenex, So. of Laurel, crude main heater air preheat system
Earth Builders, Inc., Phillips Co., portable hot mix asphalt plant
Earth Builders, Inc., Phillips Co., portable gravel crushing plant
C & C Plywood, Kalispell, cyclones on boiler
Harding's Redi-Mix, Lake Co., portable gravel crushing and hot mix plant

b. Operating Permits: None

c. Tax Credit:

Great Western Sugar Co., Billings, flue gas cleaning system on coal-fired boilers
The Anaconda Co., Anaconda, sulfuric acid plant expansion
Anaconda Co., Aluminum Division, Columbia Falls, dry scrubber and Sumitomo technology
Louisiana-Pacific, Missoula, multicloners, baghouses, boiler modifications

4. Variance Status:

a. Current

Anaconda Aluminum Co., Columbia Falls, F⁻ and particulate, expires 6/30/78
The Anaconda Company, SO₂, expires June 30, 1978
The Anaconda Company, Anaconda, visibility rule, not yet scheduled

b. New

ASARCO, Inc., East Helena, amendment of 1974 Stipulation for additional shakedown time on acid plant

5. Enforcement Actions:

a. Citations - None

b. Notice of Violation - None

c. Order for Corrective Action - None

d. Court Action - None

The Anaconda Company was assessed a penalty of \$73,600 for violating the 1974 Stipulation which requires the company to meet applicable federal ambient air quality standards.

6. TP Burner and Open Burning:

No. at start	39
New starts	1
Shutdowns	0
No. at end	40

Tepee burner at Spring Creek Forest Products in Judith Gap was scheduled to start up in December.

Open Burning Permits:

Kalispell	21	Missoula Co.	8
Lake Co.	11	Yellowstone Co.	10
Cascade Co.	2	Rest of State	146
Sanders Co.	0	Total for State	198

7. Source Tests Performed:

a. Agency source tests - None

b. Non-agency source test:

Exxon performed stack tests on their coker as required by the permit.
Data has not been submitted yet.

8. Field Investigations:

C & C Plywood, Kalispell, boiler 4 and 5, documentation, no violation
American Asphalt, Kalispell, conference regarding heating procedure on
crusher conveyer, inspection
Stoltze Land & Lumber, Columbia Falls, documentation, no violation
Stoltze Land & Lumber, Columbia Falls, conference regarding tepee burner
E & L Cedar, Troy, conference regarding installation of tepee burner
Kennedy-Stevens, Eureka, tepee burner, documentation, no violation
American Timber, Olney, tepee burner no longer in use; conference on
operation of wood-fired burner
Ksanka Lumber, Fortine, inspection
Eureka Landfill, Eureka, fire at site, referred to sanitarian

9. Complaints:

Individual, Eureka, landfill fire
Pony Homecoming Club Park, Pony, odor, referred to Fish and Game
Burlington Northern, Joliet, open burning, investigation

10. Data Processing Services:

- a. Ambient Data Summary: See attached
- b. Emission Inventory Status: No significant activities
- c. Prevention of Significant Deterioration:
Met with Mr. Hernandez, Noxon, and discussed draft Montana regulation
and Clean Air Act Amendments of 1977.
- d. Modeling:

Analysis of Cenex stack height proposals. New stacks showed a
significant reduction in predicted ground level sulfur dioxide
concentrations.

Analysis performed on ASARCO sulfur dioxide emissions for Kennedy
Park area to test for attainment - non-attainment status. Modeling
showed baghouses as causing violations of ambient federal short-term
standards for sulfur dioxide.

11. Environmental Impact Statements:

- a. Agency Impact Determinations

The Department responded to comments received on Colstrip 3 & 4 EIS
Addendum and finalized conditions for granting permit.
- b. Other Agency EIS's Reviewed: None

12. Status of Studies, Contracts and Reports:

ASARCO-Troy Project, draft EIS deadline extended by ASARCO to allow inclusion of more data. Sepmt \$11,464 of \$21,560.

MAPS - Full-time operator hired for Missoula monitoring station on a six-week contract.

MAPS - Dr. Warren, Montana State University, hired on contract from January 1 - December 31, 1978, to study cancer rates in Butte and Anaconda.

MAPS - Historical Emission Inventory final contract on pilot study was agreed on with Historical Research Associates of Missoula for Butte-Anaconda area.

MAPS - Real Time Emission Inventory - daily emission inventory to coincide with pulmonary function testing is currently operational.

MAPS - Emission inventory update Request for Proposal was finalized and sent to eighteen potential contractors.

MAPS - EPA in Research Triangle Park is selecting control group from mortality tapes supplied by Bureau of Records and Statistics for mortality portion of Project.

MAPS - Meteorologist hired for Project duration (approximately one year and a half). Second meteorologist hired on contract to do computer work.

Poplar River Study - data analysis continuing, interim report due in mid-February.

Anaconda - in-stack instrument evaluation by Rockwell International has not been finalized.

13. Schools and Training:

Three engineers attended a workshop in Denver on continuous stack monitors sponsored by EPA.

14. Public Hearings and Meetings:

a. Public Hearings Held:

Board of Health Hearing on proposed rule changes for air pollution standards and Anaconda Aluminum Company's request to shut down.

b. Meetings attended:

Montana Power Company, Helena, discuss emission limitation figures being contemplated for Colstrip units 3 & 4.

Local government officials, Butte-Anaconda, regarding area industrial groups concerning SAMWG proposal.

Stauffer Chemical, Butte, orientation of continuous monitoring sites and new wind tower system.

Anaconda Company personnel, regarding SO₂ variance, penalty and related matters. Also met concerning SIP revision for Butte and emergency episode plan for smelter.

Shell Oil Co., personnel regarding construction application for gas treatment plant near Sidney.

Midwest Research, Butte, regarding Berkeley Pit

Montana Contractors Association, Helena, regarding enforcement

MAPS - Dr. Buswell, Helena, concerning quality assurance for pulmonary function testing.

Dr. Warren, Helena, to discuss cancer study.

Hoerner-Waldorf, Louisiana Pacific, Evans Product, Missoula
White Pine, Champion International, Missoula - emission inventory

Butte, TSP, met with technical staff

c. Intra-staff Meetings:

Meetings on attainment-non-attainment designation
MAPS project meetings
Staff meetings

15. Public Information Requests:

Rules: 14
Clean Air Act: 7
General Information: 10

16. N.A.

17. Other: None

MINNAPPA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

November, 1977

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Pollutant: Misc. Indicators		Units:				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
144	Fluoride Papers Belgium Mt. - Box Flathead Co. Anaconda South Flathead Co. Glacier Park #1 Glacier Nat. Pk. Glacier Park #2 Glacier Nat. Pk. Glacier Park #9 Glacier Nat. Pk. Fluoride Plates	86/eq 0.120	0.110 days 1,610	0.110 days 1,610	0.707 11	
		6,030	27,480	27,480	5,873 11	
		0,460	0,640	0,640	0,342 11	
		0,190	0,580	0,580	0,342 11	
		0,470	0,560	0,560	0,396 11	
144	Anaconda South Flathead Co. Trailer-MAC Flathead Co. Glacier Park #1 Glacier Nat. Pk. Glacier Park #2 Glacier Nat. Pk. Glacier Park #9 Glacier Nat. Pk.	6,890 0,620	37,850 2,000	37,850 2,000	7,780 1,201	10 10
		0,780	0,780	0,780	0,464 8	
		0,470	0,710	0,710	0,543 6	
		0,380	0,470	0,470	0,388 11	

Pollutant: Misc. Bubbler Data		Units: ppm				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
140	Sulfur Dioxide Lockwood School Billings					
143	Seabee Daniels Co. Fort Peck McDene Co. Lane Deer Rosebud Co. BN Site Colstrip	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	11 11 11 9
143	Nitrogen Dioxide Seabee Daniels Co. Fort Peck McDene Co. Lane Deer Rosebud Co. BN Site Colstrip	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	11 11 11 9

* Site discontinued

Pollutant: Misc. Indicators		Units:				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
141	Dustfall - tons Mountain States Great Falls Fire Sta. #1 Great Falls Fairgrounds	80.64 23.24	80.64 31.17	80.64 31.17	29.41 17.83	11 10
	Sulfation Rate 1/8 mi SW Coop Billings	0.0 2,730	31.46 4,380	31.46 4,380	12.46 2,142	11 10
140	East of Laurel Billings	2,120	3,220	3,220	1,770 8	
	HS-Rail Trucking Billings	1,780	1,840	1,840	1,718 9	
141	Stoney Car Track Great Falls Phillips Ref #1 Great Falls Phillips Ref #2 Great Falls Huron	0,387 0,472 0,411	0,607 9,629 0,575	0,607 9,629 0,575	0,233 0,443 0,365	10 11 11
142	E. Helena 212 E. Pacific E. Helena East of Track St. E. Helena	0,290 0,670 1,060	0,650 0,910 0,960	0,650 0,910 0,960	0,263 0,486 0,699	9 10 9

Pollutant: TSP		Units: ug/cu meter				
AREA		HIGH READING			ARITHMETIC AVER.	
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
140	Morton-Decker Big Horn Co. Warren Ranch Big Horn Co. Lockwood School Billings	51 37 37 78	148 108 108 166	148 108 108 166	47.8 26.0 26.0 56.3	11 11 11 11
	KEND Billings City Hall Billings Grand Ave. Sch. Billings	30 85 39	163 165 155	163 165 155	56.3 64.3 56.1	11 11 11
	Laurel Jr. High Laurel Hospital Roof Great Falls Fire Sta. #1 Great Falls 10th Ave. So. Great Falls	43 67 89 67	150 150 869 225	150 150 869 225	41.8 41.8 68.8 44.1	11 11 11 11
141	Highway Jct. Anaconda McKinley Reg. Granite Co. Grewley School Butte Glimm Conatti Butte	245 161 100 142 161	272 161 217 231 297	272 161 217 231 297	96.3 49.6 65.0 90.5 86.1	6 11 11 8 7

MONSIEUR DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
MONTHLY SUMMARY OF AIR QUALITY DATA
November, 1977

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Pollutant: TSP		Units: ug/cu meter				
AREA		HIGH READING			ARITHMETIC AVER.	
AGCS	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
147	Adrian Res. Wallerville Elbert Res. SIL Res. Co. Trevino Res. SIL Res. Co. Microwave Jefferson Co. 212 E. Pacific Levittsilk Co. Kaler Res. Three Forks Littlefield Hill Miles City Glenview Hansen Co. Lane Deer Rosenbud Co. Fort Peck McCone Co. Broadus Powder Riv. Co. BN Site Colstrip Border Site Schoey Engberg Site Schoey	107 11 47 40 102 229 29 32 9 13 95 17 24	130 49 89 103 192 309 45 102 91 275 95 107 109	140 49 89 103 192 309 45 102 91 275 95 107 109	43.5 73.2 76.1 27.0 75.2 131.3 20.8 24.6 28.5 24.7 35.2 30.8 36.1	9 6 9 11 11 4 11 11 10 11 9 9 9

* No valid samples for November.

Pollutant: TSP		Units: ug/cu meter				
AREA		HIGH READING			ARITHMETIC AVER.	
AGCS	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
144	Adrian Res. Co. Falls Court House Miles City Jr Field Miles City Co. Kalinopli Flathead Co. Troy-Troon Lincoln Co. Hoerner Wald. #1 Miles City Co. Hoerner Wald. #2 Miles City Co. Hoerner Wald. #3 Miles City Co. Court House Lawn Miles City Brown Res. Libby	131 783 107 62 108 48 53 45 209 196	467 295 180 226 171 255 255 84 279 196	467 342 214 226 171 255 255 84 279 196	116.7 95.4 53.4 79.5 32.4 35.3 37.1 26.2 82.3 113.9	11 11 11 11 4 8 8 5 4 4

Tex Fed. Pri Std

Tex Fed Sec Std

Tex Fed Sec Std

1 ex Mc Pri Std

2 ex Fed Sec Std

Pollutant: Mee, Continuous Data		Units: ppm				
AREA		HIGH READING			ARITHMETIC AVER.	
AGCS	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
140	Carbon Monoxide 27th & Montana Billings	19.20	19.20	19.20	2.253	7
141	10th Ave. So. Great Falls Applene West Butte	18.60	18.60	18.60	2.279	5
144	Halfmoon Jet. Miles City Hydrocarbons 27th & Montana Billings	10.00	14.00	14.00	0.682	6
140	Hydrocarbons 27th & Montana Billings	23.00	23.00	23.00	5.516	10
143	BN Site Colstrip	---	---	---	---	---
140	Hydrocarbons 27th & Montana Billings	---	---	---	---	---
141	BN Site Colstrip	---	---	---	---	---
140	Hydrocarbons 27th & Montana Billings	---	---	---	---	---
141	BN Site Colstrip	---	---	---	---	---
143	BN Site Colstrip	---	---	---	---	---
140	Hydrocarbons 27th & Montana Billings	---	---	---	---	---
141	BN Site Colstrip	---	---	---	---	---
143	BN Site Colstrip	---	---	---	---	---

** data invalid

*** data unavailable at time of report

Pollutant: Mee Continuous Data		Units: ppm				
AREA		HIGH READING			ARITHMETIC AVER.	
AGCS	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	Comments
140	Carbon Monoxide 27th & Montana Billings	0.04	0.08	0.08	0.018	11
142	Alpine West Butte Sulfur Dioxide 27th & Montana Billings	0.09	0.15	0.15	0.045	5
140	Hydrocarbons 27th & Montana Billings	---	---	---	---	---
142	East Stack E. Helena Microwave E. Helena C-Hill Anaconda Hi-Way Jet Anaconda Post Office Anaconda Mill Creek Anaconda	0.51 0.65 1.72 2.00 0.50	0.66 1.40 3.51 2.00 1.05	0.66 1.40 3.51 2.00 1.05	0.012 0.010 0.023 0.35 0.11	11 11 11 11 11
143	BN Site Colstrip	---	---	---	---	---

Tex Nat 24 hr Std

Tex NT 24hr Std

Tex MT 1hr Std

Tex MT 24hr std

Tex MT 1 hr Std

Tex Nat 24hr Std

Tex Nat 1hr Std

Tex MT 1hr Std

*** data unavailable at time of report

